

Applicants: John O'Connor and Steven Birken
Serial No.: 09/311,428
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to applicants' right to pursue the subject matter of these claims in a later-filed application and add new claims 67-80 as follows:

--67.(New) A method for detecting gestational trophoblast malignancy in a subject which comprises:

- (1) collecting a suitable sample from the subject;
- (2) performing the following steps (a) and (b) which may be performed in any order:
- (a) (i) immobilizing capturing antibody on a solid matrix under conditions permitting binding of the capturing antibody to the solid matrix, wherein the capturing antibody specifically binds to an early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG);
 - (ii) contacting the immobilized capturing antibody with a first portion of the sample obtained in step (1) under conditions permitting binding of the capturing antibody to any early pregnancy associated molecular isoform of hCG present in the sample so as to form a complex;
 - (iii) removing any unbound sample from the complex;
 - (iv) contacting the complex with detecting antibody which specifically binds to an early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG), under conditions permitting binding of the detecting antibody to the hCG so as to form a complex;
 - (v) removing any unbound detecting antibody;

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- (vi) determining the amount of detecting antibody which binds to the complex;
 - (b) (i) immobilizing capturing antibody on a solid matrix under conditions permitting binding of the capturing antibody to the solid matrix, wherein the capturing antibody specifically binds to intact non-nicked human chorionic gonadotropin (hCG);
 - (ii) contacting the immobilized capturing antibody with a second portion of the sample obtained in step (1) under conditions permitting binding of the capturing antibody to any intact non-nicked human chorionic gonadotropin (hCG) present in the sample so as to form a complex;
 - (iii) removing any unbound sample from the complex;
 - (iv) contacting the complex with detecting antibody which specifically binds to intact non-nicked human chorionic gonadotropin (hCG) under conditions permitting binding of the detecting antibody to the hCG so as to form a complex;
 - (v) removing any unbound detecting antibody;
 - (vi) determining the amount of detecting antibody which binds to the complex;
 - (3) comparing the amount of antibody measured in step (2) (a) with the amount of antibody measured in step (2) (b), so as to thereby determine a ratio of the amount of antibody

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measured in step (2)(a) with the amount of antibody measured in step (2)(b);

- (4) repeating steps (2) through (3), wherein a continued high ratio indicates that the subject is afflicted with gestational trophoblast malignancy.--

--68.(New) A method for detecting gestational trophoblast malignancy in a subject which comprises:

- (1) collecting a suitable sample from the subject;
- (2) performing the following steps (a) and (b) which may be performed in any order:
- (a) (i) immobilizing capturing antibody on a solid matrix under conditions permitting binding of the capturing antibody to the solid matrix, wherein the capturing antibody specifically binds to an early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG);
- (ii) contacting the immobilized capturing antibody with a first portion of the sample obtained in step (1) under conditions permitting binding of the capturing antibody to any early pregnancy associated molecular isoform of hCG present in the sample so as to form a complex;
- (iii) removing any unbound sample from the complex;
- (iv) determining the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) which is bound to the capturing antibody in the complex;

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- (b) (i) immobilizing capturing antibody on a solid matrix under conditions permitting binding of the capturing antibody to the solid matrix, wherein the capturing antibody specifically binds to intact non-nicked human chorionic gonadotropin (hCG);
 - (ii) contacting the immobilized capturing antibody with a second portion of the sample obtained in step (1) under conditions permitting binding of the capturing antibody to any intact non-nicked human chorionic gonadotropin (hCG) present in the sample so as to form a complex;
 - (iii) removing any unbound sample from the complex;
 - (iv) determining the amount of intact non-nicked human chorionic gonadotropin (hCG) which is bound to the capturing antibody in the complex;
- (3) comparing the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) measured in step (2)(a) with the amount of intact non-nicked human chorionic gonadotropin (hCG) measured in step (2)(b), so as to thereby determine a ratio of the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) measured in step (2)(a) measured in step (2)(a) with the amount of intact non-nicked human chorionic gonadotropin (hCG) measured in step (2)(b);
 - (4) repeating steps (2) through (3), wherein a continued high ratio indicates that the subject is afflicted with

gestational trophoblast malignancy.--

--69.(New) A method for detecting gestational trophoblast malignancy in a subject which comprises:

- (1) collecting a suitable sample from the subject;
- (2) performing the following steps (a) and (b) which may be performed in any order:
- (a) (i) contacting one portion of the sample obtained in step (1) with a capturing antibody under conditions permitting binding of the capturing antibody to any early pregnancy associated molecular isoform of hCG present in the sample so as to form a complex;
 - (ii) removing any unbound sample and any unbound capturing antibody from the complex;
 - (iii) contacting the complex with detecting antibody which specifically binds to an early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG), under conditions permitting binding of the detecting antibody to the hCG so as to form a complex;
 - (iv) removing any unbound detecting antibody;
 - (vi) determining the amount of detecting antibody which binds to the complex;
- (b) (i) contacting a second portion of the sample obtained in step (1) with a capturing antibody under conditions permitting binding of the capturing antibody to any intact non-nicked human chorionic

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- gonadotropin (hCG) present in the sample so as to form a complex;
 - (ii) removing any unbound sample and any unbound capturing antibody from the complex;
 - (iii) contacting the complex with detecting antibody which specifically binds to intact non-nicked human chorionic gonadotropin (hCG) under conditions permitting binding of the detecting antibody to the hCG so as to form a complex;
 - (iv) removing any unbound detecting antibody;
 - (v) determining the amount of detecting antibody which binds to the complex;

- (3) comparing the amount of antibody measured in step (2) (a) with the amount of antibody measured in step (2) (b), so as to thereby determine a ratio of the amount of antibody measured in step (2) (a) with the amount of antibody measured in step (2) (b);
- (4) repeating steps (2) through (3), wherein a continued high ratio indicates that the subject is afflicted with gestational trophoblast malignancy.--

--70.(New) A method for detecting gestational trophoblast malignancy in a subject which comprises:

- (1) collecting a suitable sample from the subject;
- (2) performing the following steps (a) and (b) which may be performed in any order:
 - (a) (i) contacting one portion of the sample obtained in step (1) with a capturing antibody under conditions permitting binding of the capturing antibody to any

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- early pregnancy associated molecular isoform of hCG present in the sample so as to form a complex;
 - (ii) removing any unbound sample and any unbound capturing antibody from the complex;
 - (iii) determining the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) which is bound to the capturing antibody in the complex;
 - (b) (i) contacting a second portion of the sample obtained in step (1) with a capturing antibody under conditions permitting binding of the capturing antibody to any intact non-nicked human chorionic gonadotropin (hCG) present in the sample so as to form a complex;
 - (ii) removing any unbound sample and any unbound capturing antibody from the complex;
 - (iii) determining the amount of intact non-nicked human chorionic gonadotropin (hCG) which is bound to the capturing antibody in the complex;
 - (3) comparing the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) measured in step (2)(a) with the amount of intact non-nicked human chorionic gonadotropin (hCG) measured in step (2)(b), so as to thereby determine a ratio of the amount of early pregnancy associated molecular isoform of human chorionic gonadotropin (hCG) measured in step (2)(a) measured in step (2)(a) with the amount of intact

non-nicked human chorionic gonadotropin (hCG) measured in step (2) (b);

- (4) repeating steps (2) through (3), wherein a continued high ratio indicates that the subject is afflicted with gestational trophoblast malignancy.--

--71. (New) The method of any one of claims 67-70, wherein the capturing antibody of step (b) is B152 (ATCC Designation No. HB-12467).---

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--72. (New) The method of any one of claims 67-70, wherein the capturing antibody of step (c) is B109 is (ATCC Designation No. PTA-1624).---

--73. (New) The method of claim 67 or 69, wherein the detecting antibody of step (b) is B207 (ATCC Designation No. PTA-1626).---

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--74. (New) The method of claim 67 or 69, wherein the detecting antibody of step (c) is B108 (ATCC Designation No. PTA-1625).---

--75. (New) The method of any one of claims 67-70, wherein the gestational trophoblast malignancy is hydatidiform mole.--

--76. (New) The method of any one of claims 67-70, wherein the gestational trophoblast malignancy is choriocarcinoma.--

--77. (New) The method of any one of claims 67-70, wherein the sample is a urinary sample or blood sample.--

--78. (New) The method of any one of claims 67-70, wherein the